

Application No. 09/911,673
Amendment filed with RCE

Customer No. 01933

R E M A R K S

Reconsideration of this application, as amended, is respectfully requested.

THE CLAIMS

Claim 6 has been amended to more explicitly recite the features of the present invention whereby the host-side communication section transmits the video signal having the on-screen display information superimposed thereon, the display-side communication section receives the transmitted signal, and the display apparatus displays an image of the on-screen display information, along the lines recited in claim 7.

In addition, claim 27 has been added to recite that the display apparatus comprises a microdisplay apparatus that is wearable by a user, and claim 28 has been added to recite that the display apparatus comprises a microdisplay apparatus that is wearable on at least one of a head and face of a user, as supported by, for example, Figs. 5, 8-10, 12 and 18.

No new matter has been added, and it is respectfully requested that the amendments to claim 6 and the addition of claims 27 and 28 be approved and entered.

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THE PRIOR ART REJECTION

Claims 6, 7, 9, 11, 13, 16, 17 and 26 remain rejected under 35 USC 102 as being anticipated by USP 6,314,479 ("Frederick et al"); claims 14 and 15 remain rejected under 35 USC 103 as being obvious in view of the combination of Frederick et al and USP 5,630,043 ("Uhlin"); and claims 18-21 remain rejected under 35 USC 103 as being obvious in view of the combination of Frederick et al and USP 5,991,085 ("Rallison et al"). These rejections, however, are again respectfully traversed.

As explained in detail in the Response filed on November 1, 2005 (and now as more clearly recited in amended independent claim 6), according to the present invention as recited in each of independent claims 6, 7 and 26, on-screen display information is stored on the display apparatus, transmitted to the host apparatus, and then superimposed on a video signal and transmitted back to the display.

As shown in Fig. 18, for example, in a display apparatus that can be worn by a user it is necessary to make the display apparatus small by reducing the number of internal components. It can therefore be difficult to construct a sufficiently small display apparatus that includes a circuit for superimposing on-screen display information on an incoming video signal. However, if the superimposing function is transferred to the host

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apparatus, the host apparatus must store on-screen display information for each type of display apparatus to which it is to be connected. Therefore, the on-screen display information should be provided at the display.

The claimed present invention solves this problem by providing the on-screen display information at the display, while providing the superimposing function at the host. The on-screen display information can therefore be transmitted to the host to be superimposed on the video signal, and is then transmitted back to the display to be displayed.

It is respectfully submitted that none of the cited references disclose, teach or suggest this feature of the claimed present invention.

More specifically, according to the claimed present invention, on-screen display information is: 1) originally stored at the display, 2) transmitted to the host, 3) superimposed at the host on a video signal that is sent from the host to the display, 4) received superimposed on the video signal at the display, and 5) displayed at the display based on the received video signal with the on-screen display information superimposed thereon.

It is respectfully submitted that Frederick et al in no way can be considered to even remotely disclose the above described

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features 1 and 2, and therefore also does not disclose, teach or suggest features 3-5 using data originally stored on the display apparatus. Thus, as explained in detail in the Response filed on November 1, 2005, Frederick et al clearly does not disclose, teach or suggest transmitting on-screen display information in a loop from the display to the host, superimposing the on-screen display information on a video signal at the host, and transmitting the video signal with the on-screen display information superimposed thereon back to the display.

Indeed, it is respectfully submitted that Frederick et al is directed to large displays (or at least to displays that are very large when compared to wearable displays), and therefore does not encounter the problem solved by the claimed present invention.

On page 2 of the Advisory Action, the Examiner cites column 4, lines 46-50 of Frederick et al as disclosing on-screen display information that travels in a loop from the display, to the host, and back to the display:

When the display is in slave-mode and the PC has complete control of the tuner and stores the channel map, the host computing device and application software will be responsible for the channel mapping, Closed Caption Decoding, and V-Chip requirements.

The Examiner asserts, moreover, "the channel mapping, Closed Caption Decoding and V-chip requirements correspond to an information superimposing section as claimed."

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Of course, closed captioning requires that information (specifically text information) be displayed on a screen to be superimposed on the video image being displayed on the screen.

It is respectfully pointed out, however, that according to the claimed present invention the information superimposing section superimposes on-screen display information that is received from the display apparatus on the video signal, and transmits the video signal with the on-screen display information superimposed thereon back to the display apparatus.

And it is respectfully submitted that it is not logical to suggest that closed captioning information is first stored at the display, then transmitted to the host apparatus supplying a video signal to the display and superimposed on the video signal, and then transmitted back on the display. That is, closed captioning information must inherently be supplied to the display from the source of the video information, and does not originate at the display to be later superimposed on the video signal.

Clearly, therefore, even though Frederick et al discloses performing closed captioning decoding at the PC and transmitting the information to the display, the closed captioning information does not at all correspond to the on-screen display information of the claimed present invention, because closed captioning information is not first stored on the display and then

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transmitted to the host for decoding and superimposition on a video signal according to Frederick et al.

It is respectfully submitted, moreover, that even if channel mapping and V-chip processing were on-screen display information that is superimposed on a video signal and transmitted with a video signal to a display to be displayed (which, clearly, they are not), channel mapping and V-chip requirements processing as described by Frederick et al still would not correspond to on-screen display information as recited in independent claims 6, 7 and 26, because Frederick et al merely discloses performing display functions at the PC instead of at the display, when the display is in slave-mode. In addition, Frederick et al does not disclose, teach or suggest first storing channel mapping and V-chip requirements at the display, sending them to the host, and then superimposing them on a video signal and transmitting them back to the display.

As pointed out by the Examiner at the bottom of page 2 and top of page 3 of the Advisory Action, Fig. 6 of Frederick et al does show two-way communication between the display and the host. However, it is respectfully pointed out that Fig. 6 of Frederick et al only shows that user input, EDID data, composite video data and audio data may be transmitted from the display to the host. And it is respectfully submitted that Fig. 6 of Frederick et al

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does not show on screen display information being transmitted from the display to the host and then being superimposed on a video signal.

The Examiner also points out, at the top of page 3 of the Advisory Action, that instructions for volume, brightness, contrast and color can be transmitted from the display to the host according to Frederick et al. It is respectfully pointed out, however, that although control information is processed by the host, information instructing brightness and contrast is not transmitted back to the display according to Frederick et al.

Indeed, in making the assertion with respect to volume and contrast control according to Frederick et al, the Examiner points out that according to Frederick et al the display can be set by a manufacturer to generate an on-screen display internally for a certain feature (corresponding to the disclosure at column 11, lines 37-45 of Frederick et al). It is respectfully pointed out, however, that Frederick et al makes no mention of transmitting this internally generated on-screen display back to the PC to be superimposed on a video signal.

The Examiner also argues in detail that Fig. 6 of Frederick et al discloses bi-directional communication between the host and display. Indeed, Fig. 6 of Frederick et al does show information traveling from the host to the display, and Fig. 6 of Frederick et al shows information traveling from the display to the host.

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However, it is yet again respectfully pointed out that Frederick et al does not disclose, teach or suggest on-screen display information that is stored at the display, then transmitted to the host, then superimposed on a video signal from the host to the display, then transmitted to the display with the video signal, and then displayed on the display in the manner of the claimed present invention.

That is, it is not enough that Frederick et al discloses information that is transmitted to the display to be superimposed on the display (such as closed captioning information), or that the display itself can generate an on-screen display (OSD), or that bi-directional communication occurs between the host and the display.

Frederick et al simply does not disclose, teach or suggest on-screen display information (that is, the same on-screen display information, and not closed captioning information in one instance or volume/contrast/brightness information in another) that is: 1) originally stored at the display, 2) transmitted to the host, 3) superimposed at the host on a video signal that is sent from the host to the display, 4) received superimposed on the video signal at the display, and 5) displayed at the display based on the received video signal with the on-screen display information superimposed thereon, as according to the claimed present invention.

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In view of the foregoing, it is respectfully submitted that the present invention as recited in independent claims 6, 7 and 26, as well as claims 9, 11, 13-21 and 27-28 depending from claims 6 and 7, respectively, clearly patentably distinguishes over Frederick et al, taken singly or in combination with any of the other prior art references of record, under 35 USC 102 as well as under 35 USC 103.

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Entry of this Amendment, allowance of the claims and the passing of this application to issue are respectfully solicited.

If the Examiner has any comments, questions, objections or recommendations, the Examiner is invited to telephone the undersigned at the telephone number given below for prompt action.

Respectfully submitted,


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